

The depth of the involucre remained constant for all the forms collected.

The notes here presented are but inadequate observations. They suggest the desirability of conducting genetical studies in this genus which as in the case of the mutating *oenotheras* consist of forms growing far from their place of origin.

Extensive experiments might solve the problem as to whether in these elongated receptacles we have mutating characters or reversions. The resulting spike-like cluster characteristic of more primitive plants might indicate the latter interpretations as the more probable. Jost states on page 395 of his work on *Plant Physiologie*:† “New characters, that is mutations, behave the same as reversions.”

It is in the genus *Achillea* that we also have the oft-quoted examples of species mutually excluding each other from calcareous and siliciferous soils. Schimper states in *Plant Geography*,‡ page 105, that *Achillea millefolium* will grow equally well in either kind of soil while *A. moschata* is an inhabitant of siliciferous soil, excluding *A. atrata* which prefers calcareous soils. It would be of interest to determine the lengths of the receptacles of the plants growing in these different kinds of soils and the influence if any of change of soil in modifying the lengths of the receptacle. It is possible also that seasonal conditions may be important factors in the appearance of these interesting plants.

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ADDITIONS TO THE FLORA OF WESTERN OREGON DURING 1920

BY JAMES C. NELSON

Although the writer did not find it possible to collect very extensively during the past season, the introduction of foreign plants into Western Oregon seems to have gone on unchecked.

† Jost, Ludwig, *Lectures on Plant Physiology*, 1907, trans. by Gibson.

‡ Schimper, A. F. W., *Plant Geography upon a Physiological Basis*, 1903, trans. by Fisher.

All of the species listed below were found growing spontaneously with a good chance of persisting, and none of them find mention in Piper & Bèattie's Flora of the Northwest Coast, although all were collected within the limits of that manual. These 34 species bring the total number of species not mentioned in the above work, but reported by the writer, to 343.

Species plainly introduced are marked *.

1. *Alisma Plantago-aquatica* L. var. *parviflorum* (Pursh) Torr. Muddy shore of Willamette River, Eugene.
2. *Muhlenbergia squarrosa* (Trin.) Rydb. Muddy shore of Columbia River on Hayden Island, opposite Vancouver, Wash. Not infrequent along the upper Columbia.
3. **Cynosurus cchinatus* L. Abundantly established on dry slope of Skinner's Butte, Eugene.
4. **Eragrostis cilianensis* (All.) Link. Sandy river-bank near city dump, Eugene.
5. **Agropyron glaucum* R. & S. In shipyard on old ballast, Linnton, Portland.
6. **Ornithogalum umbellatum* L. An occasional escape to vacant lots and roadsides, Salem.
7. **Allium Cepa* L. Occasional on railroad-embankments near Salem.
8. **Urtica dioica* L. In shipyard on old ballast, Linnton, Portland.
9. **Maclura pomifera* (Raf.) Schneider. Freely escaping from a neglected hedge along roadside near Springfield, Lane Co.
10. **Rumex cuneifolius* Campd. In shipyard on old ballast, Linnton, Portland. A Patagonian species.
11. **Atriplex rosea* L. Sandy waste ground on river-shore. Lower Albina, Portland. Previously reported by Suksdorf.
12. **Amaranthus paniculatus* L. Waste ground at old city dump, Salem. Occasional in cultivation.
13. **Corrigiola littoralis* L. Abundant in dry gravelly soil in railroad-yards, Lower Albina, Portland. Previously collected by Suksdorf.

14. **Raphanus Raphanistrum* L. var. *purpureus* (Reichenb.)
Domin. Growing with the species along railroad-tracks
in State Fair Grounds, Salem.
15. **Erysimum repandum* L. Along railroad-tracks, Lower Al-
bina, Portland; and in similar situations at Salem.
16. **Lepidium densiflorum* Schrad. var. *pubescarpum* (A. Nels.)
Thellung. Waste ground in railroad-yards, Lower Al-
bina, Portland. Probably introduced from Rocky Moun-
tain region.
17. **Courtingia orientalis* (L.) Dumort. With the last, and also
along railroad-tracks near Salem.
18. **Roripa Armoracia* (L.) Hitchc. A frequent escape to
vacant lots and waste ground in Salem.
19. **Rubus pubescens* Weihe. On a dry shaly bank along the
Oregon Electric Railroad at Salem.
20. **Medicago minima* L. In shipyard on old ballast, Linnton,
Portland.
21. **Erodium aethiopicum* (Lam.) Brumhard & Thellung.
Waste ground in rear of cannery, Salem.
22. **Oxalis corniculata* L. Under rose-bushes on street-parking,
Salem.
23. **Hibiscus Trionum* L. In a vegetable-garden, Salem.
24. **Lycopersicum esculentum* L. Frequent in waste places, and
occasional on sand-bars along the Willamette River,
Salem.
25. **Physalis ixocarpa* Brot. Sandy waste ground in railroad-
yards, Lower Albina, Portland. Not found in cultivation.
26. **Mazus rugosus* Lour. Muddy shore of Columbia River on
Hayden Island, opposite Vancouver, Wash. Previously
collected by Gorman at border of pond in Kenton, Port-
land. A native of tropical east Asia.
27. *Mimulus floribundus* Lindl. Muddy shore of the Columbia
River on Hayden Island, opposite Vancouver, Wash.
Noteworthy so near sea-level.
28. *Pentstemon dcustus* Dougl. Gravelly shore of the Willamette
River, Eugene. Common southward and in eastern
Oregon.

29. *Ilysanthes⁴ inaequalis* (Walt.) Pennell. On muddy shores of the Willamette River, Salem. Perhaps has been mistaken for *I. dubia* (L.) Barnh.
30. **Orobanche minor* Sm. In shipyard on old ballast, Linnton, Portland.
31. **Rubia tinctorum* L. On street-parking, Salem. Nowhere found in cultivation.
32. **Lonicera Xylosticum* L. Along railroad-track at Mute School, Salem.
33. **Solidago serotina* Ait. var. *gigantea* (Ait.) Gray. Waste ground at old city dump, Salem. A native of the eastern U. S., and frequent here in cultivation.
34. **Centaurea Jacea* L. var. *lacerata* Koch. Dry roadside in river-bottom near Orville, Marion Co.

I am again under obligation to Mr. J. F. Macbride for his unwearying kindness in verifying and correcting these determinations. Specimens of all the above have been deposited in the Gray Herbarium, and also in the herbarium of the Philadelphia Academy of Science (naturalized species only).

Mr. S. B. Parish's exhaustive study of the Immigrant Plants of Southern California (Bull. S. Cal. Acad. Sci. 19: Part 4, 3-30. Oct. 1920) affords an interesting contrast between the weed-floras of the two neighboring States. He includes in his list 290 species, and appears to have thoroughly covered his territory; whereas in Western Oregon north of the Umpqua Valley something over 450 introduced species have been reported—and the end is not yet! While the warmer winters of Southern California permit a number of sub-tropical species to gain a foothold that would be unable to survive in Oregon, this advantage is more than offset by the greater aridity of the Californian summer. The climate of Western Oregon is in this respect more nearly like that of Western Europe, and the immigrants from that very weedy region therefore find summer conditions more favorable here than further south, while they escape the severe winters of the Atlantic seaboard. If our Oregon rainfall could be distributed so as to give us a few more inches of precipitation in

the summer months, we might easily become the weed-paradise of the world, and a convincing example of the results of unrestricted immigration!

THE FLORA OF THE TOWN OF SOUTHOLD, LONG ISLAND AND GARDINER'S IELAND

BY STEWARD H. BURNHAM AND ROY A. LATHAM

(Continued from January-February TORREYA)

SPERMATOPHYTA

Picea rubens Sarg.—On Gid's Island, July 24, 1920 (Dr. C. S. Gager, N. Taylor & R. Latham). This island does not cover over three acres and is entirely surrounded by salt marshes. Two of the four trees are dead and the other two more than half dead: but there are four little seedlings ten to twenty inches high. Mr. Taylor remarks that these are evidently the last remains of what was once a spruce forest covering the whole island and that they are putting up a losing fight.

Pinus Strobus L.—A colony of nearly 300 trees in a swamp at Greenport; some of the trees actually growing where their roots are submerged a portion of the year. November 1918. Mr. Price, an elderly gentleman, who owns the swamp, says his father told him that they were a true native here. Some of the trees are probably 100 years old. There are eleven trees in dry woods at Southold which may be native. During August 1920 several hundred trees were seen in dry wood-lands at Bay View.

Sparganium androcladon (Engelm.) Morong—Wet place, Gardiner's Island. No. 3433. Sept. 20, 1920.

Potamogeton diversifolius Raf.—In a pond on Gardiner's Island. No. 3427.

**Agrostis altissima* (Walt.) Tuck.—Low marshy ground, rare at Mattituck.

A. perennans (Walt.) Tuck.—Dry soil throughout the town.

Aristida tuberculosa Nutt.—Rare along the railroad track in ashes at Laurel in the western part of the town. It is abundant in sandy soil a few miles further west but outside the town of Southold.

Calamagrostis cinnoides (Muhl.) Scribn.—Not common in low open ground at Mattituck.

Festuca Myuros L.—Wet sandy soil at Mattituck.

F. rubra L.—Orient in rather dry open woods near a salt marsh.

Miscanthus sinensis Anderss.—Occasionally found in waste places and old yards.

Panicularia obtusa (Muhl.) Ktze.—Mattituck in a swamp.

* The grasses were named by Mrs. Agnes Chase of the U. S. Department of Agriculture.